Environmental Services Laboratory

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LAB CAPABILITIES LIST, 2020

Energy Northwest Environmental Services laboratory has provided a wide range of environmental monitoring and analytical services to individual, municipal, commercial and utility customers since 1992. The team provides the highest quality chemical analysis, ecological monitoring assessment, and environmental & radiochemical analysis.

Energy Northwest's Environmental Services team is qualified and experienced; clients routinely call on us to help solve the most difficult analytical problems as well as handle routine needs.

The laboratory maintains accreditation for wastewater, drinking water, radiochemical analyses, and licensure as a clinical laboratory for drug screening.

Sample Turn Around

Standard turn-around times for analytical results are normally from 10 to 15 working days. Completion times for samples vary according to the number and nature of the tests required. Priority turn-around times can be provided for most tests. Energy Northwest Environmental Services Laboratory does not guarantee a set turn-around time to anyone except those who are paying additional rush fees. Samples to be analyzed for more than one contaminant will have the turn-around time associated with the longest analysis. It is not our policy to write partial reports. Contact the laboratory for priority availability and pricing.

Rush Charges

Energy Northwest Environmental Services Laboratory must be notified of and approve all rush order requests prior to receiving samples. Without prior approval, we cannot guarantee turn-around times. Although Energy Northwest Environmental Services Laboratory meets most rush requests, should a guaranteed time be missed, there will be no rush fees charged. Please call for availability and pricing before shipping rush samples. Rush projects are reported by 5 pm on the day requested and will be billed at the following rates:

10-15 Days	Listed Price
7-9 Days	Add 40%
6 Day	Add 50%
5 Day	Add 60%
4 Day	Add 70%
3 Day	Add 80%
2 Day*	Add 90%
Next Day*	Add 100%
Same Day*	Add 200%

*$100 minimum fee for rush analysis of 2-days or less.

Additional Fees

Additional fees may be applicable for non-routine sample preparations. Level III or IV reports are available at an additional charge. Prices are subject to change. Please contact us at envirolab@energy-northwest.com for quotes or to verify current pricing.

Drinking Water Analyses

BACTERIOLOGICAL

Parameter	Analytical Method
Coliform (Presence/Absence)	SM 9223 B
Coliform, Fecal	SM 9221 B, C, E1
Coliform, Total	SM 9221 B, C, E1

DISINFECTION BY-PRODUCTS

Parameter	Analytical Method
Haloacetic Acids (HAA5)	SM 6251 B, EPA 552.2
Organic Carbon, Total	SM 5310 B
Total Trihalomethanes (TTHM)	EPA 524.2, 524.3
TTHM & HAA5	EPA 524.3 & SM 6251 B EPA 524.2 & EPA 552.2
Chlorite	EPA 300.1

PRIVATE HOUSEHOLD TESTING PACKAGES

Parameter	Analytical Method
Arsenic	EPA 200.8
Arsenic & Coliform (Presence/Absence)	EPA 200.8/SM 9223 B
Coliform (Presence/Absence), Nitrate, Arsenic	Various
Coliform (Presence/Absence) & Nitrate	Various
Lead & Copper, Coliform (Presence/Absence)	EPA 200.8/SM 9223 B
Lead & Copper	EPA 200.8
Washington Complete IOC	Various

INORGANIC CONTAMINANTS

Parameter	Analytical Method
Anions: Single Anion	EPA 300.0
Each Additional Anion: (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Sulfate)	
Alkalinity	SM 2320 B/EPA 310.1
Ammonia	SM 4500 NH3
Asbestos	EPA 100.2
Chlorine, Total Residual	SM 4500-Cl G
Color	SM 2120 B
Conductivity	SM 2510 A/EPA 120.1
Cyanide, Total	EPA 335.4/SM 4500 CN- E
Dissolved Oxygen	SM 4500-O G
Hardness	SM 2340 B/EPA 200.8
Hexavalent Chromium	EPA 218.6

Hydrogen Sulfide	SM 4500-S^{2-} F
Mercury: CVAA	EPA 245.7
Mercury, Low Level	EPA 1631 E
Metals/Cations: Single Metal/Cation	EPA 200.8/EPA 200.7
Each Additional Metal or Cation:	

Al	Aluminum	Fe	Iron	Si	Silicon
Sb	Antimony	Pb	Lead	Ag	Silver
As	Arsenic	Li	Lithium	Na	Sodium
Ba	Barium	Mg	Magnesium	S	Sulfur
Be	Beryllium	Mn	Manganese	Sr	Strontium
B	Boron	Hg	Mercury	Tl	Thallium
Cd	Cadmium	Mo	Molybdenum	Sn	Tin
Ca	Calcium	Ni	Nickel	Ti	Titanium
Cr	Chromium	P	Phosphorus	U	Uranium
Co	Cobalt	K	Potassium	V	Vanadium
Cu	Copper	Se	Selenium	Zn	Zinc

pH	SM 4500-H+/EPA 150.1
Total Dissolved Solids	SM 2540 C/EPA 160.1
Total Suspended Solids	SM 2540 D
Turbidity	SM 2130 B/EPA 180.1
Volatile Suspended Solids	SM 2540 E
Drinking Water Packages	
Lead & Copper	EPA 200.8
Nitrate/Nitrite (Nitrates)	EPA 300.0
Washington Complete IOC	Various

ORGANIC COMPOUNDS

Parameter	Analytical Method
Semivolatile Organics- WA List	EPA 525.2/EPA 505
EDB/DBCP	EPA 504.1
Chlorinated Pesticides/PCB's	EPA 505
Herbicides Regulated & Unregulated	EPA 515.4
Carbamates Regulated & Unregulated	EPA 531.2
Volatile Organics	EPA 524.2

Waste Water Analyses

BACTERIOLOGICAL

Parameter	Analytical Method
Biochemical Oxygen Demand (BOD)	SM 5210 B
Biochemical Oxygen Demand, Soluble (SBOD)	SM 5210 B
Carbonaceous BOD (CBOD)	SM 5210 B
Chemical Oxygen Demand	EPA 410.4

Coliform (Presence/Absence)	SM 9223 B
Coliform, Total	SM 9221 B, C, E1

INORGANIC CONTAMINANTS

Parameter	Analytical Method
Anions: Single Anion	EPA 300.0
Each Additional Anion: (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Ortho-Phosphate, Total-Phosphate, Sulfate)	
Alkalinity, Total	SM 2320 B
Each Additional Carbonate, Bicarbonate, Hydroxide	
Ammonia	SM 4500-NH3
Asbestos	EPA 100.1
Chlorine, Total Residual	SM 4500-Cl G
Chromium, Hexavalent	SM 3500-Cr B
Color	SM 2120 B
Conductivity	SM 2510 B
Cyanide, Total	EPA 335.4
Dissolved Oxygen	SM 4500-O G
Fats, Oil, & Grease (HEM), Total	EPA 1664
Hardness	EPA 130.2/SM 2340 B
Hydrogen Sulfide	SM 4500 S
Mercury: CVAA	EPA 245.7/7471A
Mercury, Low Level	EPA 1631 E
Metals/Cations: Single Metal/Cation	EPA 200.8/EPA 200.7
Each Additional Metal or Cation:	

Al	Aluminum	Fe	Iron	Si	Silicon
Sb	Antimony	Pb	Lead	Ag	Silver
As	Arsenic	Li	Lithium	Na	Sodium
Ba	Barium	Mg	Magnesium	S	Sulfur
Be	Beryllium	Mn	Manganese	Sr	Strontium
B	Boron	Hg	Mercury	Tl	Thallium
Cd	Cadmium	Mo	Molybdenum	Sn	Tin
Ca	Calcium	Ni	Nickel	Ti	Titanium
Cr	Chromium	P	Phosphorus	U	Uranium
Co	Cobalt	K	Potassium	V	Vanadium
Cu	Copper	Se	Selenium	Zn	Zinc

Priority Pollutant Metals: (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	EPA 200.8/6020
Nitrate or Nitrite	EPA 353.2
Nitrate + Nitrite	EPA 353.2/EPA 300.0
Nitrogen, Total (NO_2 + NO_3 + TKN)	EPA 353.2 or EPA 300.0/EPA 351.2
Nitrogen, Total Kjeldahl	EPA 351.2/SM 4500-Norg C
TPH-Dx (Diesel & waste oil range organics)	WDOE NWTPH-Dx
TPH-Gx (Gasoline range organics)	WDOE NWTPH-Gx

Parameter	Analytical Method
Organic Carbon, Total	SM 5310 B/SM 5310 C
Organic Halogens, Total (TOX-Water)	EPA 9020
TOX-Solid	EPA 9023
TOX-Oil	EPA 9076
Particle Count and Size	SALI
pH	SM 4500-H+ B
Phenolics (Total)	EPA 420.1
Phosphorus, Orthophosphate	SM 4500-P E
Phosphorus, Total	SM 4500-P E
Reactive Sulfides (solids/liquids)	SW 846 CH7
Sulfides, Total	EPA 9030
Total Dissolved Solids	SM 2540 C
Total Suspended Solids	SM 2540 D
Turbidity	SM 2130 B
Volatile Suspended Solids	SM 2540 E

ORGANIC COMPOUNDS

Parameter	Analytical Method
EDB/DBCP	EPA 8011
Organochlorine Pesticides	EPA 8081 B/EPA 8270 D
Organophosphorus Pesticides	EPA 8141 B/EPA 8270 D
PCB's	EPA 8082 A
Phenols	EPA 8270 D
Semivolatile Organics (Full List)	EPA 8270 D
Volatile Organics	EPA 8260 C
BTEX (Benzene, Toluene, Ethylbenzene, Xylene) & PERC (Tetrachloroethylene)	EPA 8260 C
Total Toxic Organics (TTO) List	EPA 624/EPA 625/EPA 608/EPA 1613

Soil Analyses

Many of the Waste Water parameters are also available for soil. Please call to inquire about these capabilities

Hazardous Waste Analyses

Parameter	Analytical Method
BTU (Heat of Combustion)	ASTM D240-92
TCLP	
Extraction	EPA 1311
Single Metal/Cation	EPA 6020/EPA 1311
RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver	EPA 6020/EPA 1311

Parameter	Analytical Method
TCLP Volatiles	EPA 8260 C/EPA 1311
TCLP Semivolatiles	EPA 8270 D/EPA 1311
TCLP Benzene	EPA 8260 C
TCLP Cresol	EPA 8270 D
TCLP Pesticides	EPA 8081 B/EPA 1311
TCLP Herbicides	EPA 8151 A/EPA 1311

Lubricant and Oil Analyses

Parameter	Analytical Method
Crackle	SALI
Direct Reading Ferrography	SALI
Flash Point (Pensky Martens)	ASTM D 93
Membrane Patch Colorimetry	SALI
Oxidation/Condition by FTIR	SALI
Particle Count	SALI
Remaining Useful Life (RULER)	ASTM D 6971
Total Acid or Base Number	Titra-Lube
Viscosity, Kinematic	ASTM D 445
Water by Karl Fisher	ASTM D 6304-07
Wear Metals (21) by ICP-OED	ASTM D 5185

Material Quality Assurances

Parameter	Analytical Method
Anions (6) by Ion Chromatography	SALI
Low Melting Point Metals (12 metals) by ICP-MS	SALI
Polymer Composition by FTIR	SALI
Preparation by Oxygen Bomb or Leach	SALI

Cooling System Analyses

Parameter	Analytical Method
Acid Producers	SALI
Additives	Various
Aerobic Plate Counts	SALI
Anaerobic Bacteria	SALI
ATP	SALI
Corrosion Coupons	SALI
Metal Oxidizing Bacteria Presence/Absence	SALI
Nitrate Reducing Bacteria	SALI
Slime Producers (Pseudomonas)	SALI

Sulfate Reducing Bacteria	SALI

Radiological Analyses

Parameter	Analytical Method
Gamma Isotopic Analysis (Gamma Emitters)	SM 7120 B
Gross Alpha	SM 7110 B/EPA 900.0
Gross Beta	SM 7110 B/EPA 900.0
Gross Alpha/Beta	SM 7110 B/EPA 900.0
I-131	SM 7500 I
Radium-226	EPA 903.0
Radium-228	EPA 904.0
Tritium	SM 7500 ^{3}H B
Uranium, Natural	EPA 200.8

Additional Information

Analytical Methods

ASTM: American Society for Testing and Materials *ASTM Standards*
EPA: Environmental Protection Agency *Methods and Guidance for Analysis of Water*
NWTPH: Washington State Department of Ecology methods
SALI: Energy Northwest *Supplemental Analytical Laboratory Instructions*
SM: *Standard Methods for the Examination of Water and Wastewater*
SW 846: Environmental Protection Agency *Test Methods for Evaluating Solid Waste Physical/Chemical Methods*

The methods listed are those most commonly used, selected to conform to regulatory requirements and accepted scientific practices. An individual sample may contain materials interfering with a specific method listed above and preventing determination of the tested parameter. In these cases, with approval of our customers our analysts can usually provide accurate results using an alternate method. Any alternate methods used will be listed on the sample report.

Subcontracted Analyses

The Energy Northwest Environmental Services Laboratory offers sample tracking, shipping, results reporting and invoicing for several analyses that are not cost-effective to perform in our facility. Only cooperating laboratories with appropriate accreditations are used, and they have been selected based on both price and quality of service. In periods of unusually high sample loads or instrumentation difficulties, our cooperating laboratories also may perform some analyses we usually provide. Please call to request a quote for any analyses needed that are not listed on this capabilities list. We would be happy to help coordinate testing through a partner laboratory.

Additional Capabilities

Along with the listed chemical tests, we offer other specialized services. Environmental sampling, identification of unknowns, analysis of non-standard chemicals or matrices, thermal testing, individual agricultural chemicals and analytical method development are some of the available services. Call to request a quote for any of your requirements not included in this price list.

LAB CAPABILITIES LIST, 2020

Note on our commitment to the environment

Energy Northwest is committed to protecting the environment for current and future generations. As part of that commitment, we have developed, implemented, and maintain a comprehensive Environmental Stewardship Program (ESP). The goal of the program is to promote environmental stewardship, continually improve environmental performance, and ensure regulatory compliance.